

Guidance for Developing a Research Proposal

Roads & Highways Monitoring Committee

Subgroup of the Stormwater Working Group

1. RESEARCH PROPOSAL TITLE

Provide a title that briefly and immediately conveys to the reader the intent of the proposed study.

The title should briefly and immediately convey the intent of the proposed study using as few words as possible. While it should attract the reader's attention, it does not have to capture every element and expected task of the proposed study.

Hint: Examine every word in the title and ask yourself if it's necessary.

2. RESEARCH PROBLEM DESCRIPTION

In one or more paragraphs, provide background to set the context and explain the reason for the research by stating the general problem or need. Be explicit about the significance and scope of the problem. Explain the consequences, if any, of not doing this work.

The problem description provides an opportunity to convey how this research addresses a serious issue. It should set the context and relate this particular issue to larger regional, state, or national goals and objectives. Be as specific as possible in describing: 1) What is the problem; 2) Why do we need to solve this problem; and 3) Who is impacted by this problem? If the research problem describes a method or practice that will improve efficiencies in stormwater management, describe the shortcomings of the existing methods? Consider the consequences of not doing the project.

Hint: When describing the problem, keep thinking, "Why should we care about this problem?"

3. RESEARCH OBJECTIVE

Describe in very brief terms how the expected benefits/products of the research will be used and by whom.

Briefly describe the expected benefits of this research and how the anticipated results will be used. The objective should be short and concise. Focus on providing a full and accurate description of the final product. Only include details related to how the study will be conducted if research methodology itself is the key element of the study.

Hint: Avoid being prescriptive. Often a very reasonable objective statement reads: "To develop/evaluate (insert your research proposal title)".

4. LITERATURE SEARCH AND RESEARCH IN PROGRESS SUMMARY

Summarize literature and ongoing research found on the topic. Describe any shortcomings or deficiencies in the current body of research and how this project will address them.

Explain how this project differs from previous research efforts. Does it: 1) Build on the existing body of research; 2) Use new methodologies or expanded data sets; 3) Pull together the existing body of knowledge; or 4) Overcome shortcomings or deficiencies in the current body of research?

At a minimum, query the: 1) [Transportation Research Information Services](#) bibliographic; and 2) [Research in Progress](#) databases. Many colleges, university, or public libraries also have databases that you could use. You can also request a literature search from the WSDOT Library via a WSDOT staff contact on our committee. If no search is performed, please comment on why it was not needed.

Hint: Be specific in describing the proposed research's relationship to the existing body of knowledge. Reference the most significant relevant studies and describe how this project will advance the state of knowledge and yield practical benefits.

5. Geographic Scope and Urgency of Research

How broadly will the results of this research apply?

☐ Nationally ☐ Pacific Northwest ☐ WA Only ☐ Eastern WA ☐ Western WA ☐ Puget Sound Basin

How quickly will you need the results of this research?

☐ ASAP ☐ Within 6 months ☐ Within 1 year ☐ Within 2 years ☐ Within 5 years ☐ Ongoing

Hint: Consider whether the research problem affects other regions or states. Is there a point where it may become moot?

6. ESTIMATED COST AND TIMING (Optional)

Identify: 1) The funds required; 2) How long the project will take; and 3) Whether the project depends on another action before it can proceed.

Optional – Provide this information only if there is a good idea of the anticipated costs and timing.

Cost estimates should include the funds necessary to accomplish the objectives. Personnel time will likely make up the majority of the budget. Also consider any unique expenses such as the purchase of materials, equipment, laboratory testing/analysis, specific software, and travel. Costs can escalate quickly from research requiring specialized equipment or software. Remember to include overhead costs.

In developing timing estimates, anticipate the types of tasks and determine a reasonable amount of time to accomplish these tasks. Consider whether the tasks will be labor intensive, require setup and operation of specialized equipment, or development of specific software. Time estimates should also factor in whether it depends on another action before it can start as well as the time necessary to prepare the final report.

Hint: Consultants or academics can be a resource in identifying the level of resources and time needed to undertake the work.

7. CONTACT INFORMATION

Provide specific contact information for the person(s) involved in developing the research proposal.

Include name, title, affiliation, address, telephone number, e-mail address.

Hint: Proposals developed by a diverse team helps demonstrate broad interest in the research.